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Total No. of Printed Pages: 2



Enrollment No.....

Faculty of Engineering / Science

End Sem Examination May-2023

EN3HS01 / BC3HS03 History of Science & Technology
Programme: B.Tech. / B.Sc. Branch/Specialisation: All

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. Who is known as the Indian Father of Green Revolution? 1
(a) M.S Swaminathan (b) M. Visvesvaraya
(c) Homi Jehangir Bhabha (d) A. P. J. Abdul Kalam

ii. Who was the first Indian Scientist to receive Nobel prize in the field of science is _____. 1
(a) K. Chandrasekharan (b) Har Gobind Khorana
(c) Jagadish Chandra Bose (d) C. V. Raman

iii. CSIR was established in year- 1
(a) 2008 (b) 1956 (c) 1942 (d) 1947

iv. Swachh Bharat Mission launched in year- 1
(a) 2014 (b) 2015 (c) 2016 (d) 2018

v. The technological missions in India were initiated by? 1
(a) Pt. Jawaharlal Nehru (b) Vikram Sarabhai
(c) Satish Dhawan (d) Rajiv Gandhi

vi. When was the fourth five-year plan ended? 1
(a) 1974 (b) 1973 (c) 1975 (d) 1971

vii. The Biotech Capital of INDIA is ____? 1
(a) Bengaluru (b) Mumbai
(c) Pune (d) Ahmedabad

viii. What is full form of GSLV? 1
(a) Giant Synchronized Launch Vehicle
(b) Geo Systematic Launch Vehicle
(c) Geo Synchronous Launch Vehicle
(d) Geosynchronous Satellite Launch Vehicle

ix. Transfer of technology from Research labs to industries is an example of-
(a) Vertical TOT (b) Horizontal TOT
(c) National TOT (d) Informed TOT 1

x. Solar cooking is an example of-
(a) Patent (b) Appropriate technology
(c) Licensing (d) None of these 1

Q.2 i. Illustrate the relation between science and faith giving two examples. 2
ii. Explain how science improvises the quality of our life. 3
iii. Enlist the contributions of the ancient India to the world of science. 5
OR iv. Mention any five qualities of a good scientist and justify your answer. 5

Q.3 i. How R&D is important for the developing country? 2
ii. Explain the importance of science and technology education in India. 8
What initiatives are taken by Indian government to promote science and technology education in India?

OR iii. Write a note on technology missions in India. 8

Q.4 i. What was Nehru's vision about science and technology for Independent India? 3
ii. Enlist the scientific achievements/developments made during five-year plans period. 7
OR iii. What is full form of SPR? Also discuss any three science policies with their major objectives. 7

Q.5 i. Write short note on INSAT. 4
ii. What are non-conventional energy sources? Discuss any three sources. 6
OR iii. Discuss about India's nuclear energy program. 6

Q.6 Attempt any two: 5
i. What is appropriate technology? Give any two examples.
ii. What is the difference between franchising and licensing? Also give one example for each.
iii. Explain any five barriers of technology change. 5

Marking Scheme

BC3HS03- EN3HS01 History of Science & Technology

Q.1	i) Who is known as the Indian Father of Green Revolution? a) M.S. Swaminathan	1				Q.3	i. How R&D is important for the developing country? Explanation	2 Marks	2
	ii) Who was the first Indian Scientist to receive Nobel prize in the field of science is _____. d)C. V. Raman	1				ii.	Explain the importance of science and technology education in India. What initiatives are taken by Indian government to promote science and technology education in India?	8	
	iii) CSIR was established in year (c) 1942	1					Explain the importance of science and technology education in India.	-4 Marks	
	iv) Swachh Bharat Mission launched in year- (a) 2014	1					What initiatives are taken by Indian government to promote science and technology education in India?	-4 Marks	
	v) The technological missions in India were initiated by? (d) Rajiv Gandhi	1					Write a note on technology missions in India.		
	vi) When was the fourth five-year plan ended? (a) 1974	1				OR	If given 4 or more technology missions with their description-8 Marks		
	vii) The Biotech Capital of INDIA is ____? a)Bengluru	1							
	viii) What is full form of GSLV? d)Geosynchronous Satellite Launch Vehicle	1				Q.4	i. What was Nehru's vision about science and technology for Independent India? Explanation	3 Marks	
	ix) Transfer of technology from Research labs to industries is an example of- (a) Vertical TOT	1				ii.	Enlist the scientific achievements/developments made during five year plans period. If given 7 or more	7	
	x) Solar cooking is an example of- (b) Appropriate technology	1				OR	What is full form of SPR? Also discuss any three science policies with their major objectives? What is full form of SPR? Three science policies with their major objectives?	-7 Marks	
Q.2	i. Illustrate the relation between science and faith giving two examples. Relation between science and faith. -1 Mark	2				Q.5	i. Write short note on INSAT. Short note	4 Marks	4
	2 examples -1 Mark					ii.	What are non-conventional energy sources? Discuss any three sources. What are non-conventional energy sources? Discuss any three sources.	6	
	ii. Explain how science improvises the quality of our life? Explanation -3 Marks	3				OR	iii. Discuss about India's nuclear energy program. Discuss about India's nuclear energy program	1.5 Marks	
	iii. Enlist the contributions of the ancient India to the world of science. Contribution (5 or more) (1 EACH) -5 Marks	5						1.5*3=4..5 Marks	
OR	iv. Mention any 5 qualities of a good scientist and justify your answer. Qualities with description. (1 EACH)	5				Q.6	i. What is appropriate technology? Give any 2 examples. What is appropriate technology? Give any 2 examples.	6 Marks	
								-3 Marks	5
								-2 Marks	

ii. What is the difference between franchising and licensing? Also give one example for each. **5**

What is the difference between franchising and licensing?

-3 Marks

Also give one example for each.

-2 Marks

iii. Explain various barriers of technology change. (Any 5) **5**

Explanation (1 EACH) -5 Marks
